

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of processing a food product in a retort vessel comprising:

(a) placing the food product in a container having a fiber-based material component and sealing the container closed, the container having at least one exposed edge of paperboard;

(b) placing the closed container in the vessel and cooking the food product therein including regulating the interior conditions of the vessel using a control temperature and a control pressure, the control temperature and control pressure being within the vessel and outside of the closed container; and

(c) cooling the food product within the vessel by reducing the control temperature according to a predefined temperature schedule, said temperature schedule comprising a plurality of predetermined control temperature values;

(d) wherein cooling the food product further includes actively reducing the control pressure according to a predefined pressure schedule; said pressure schedule comprising a plurality of predetermined control pressure values, each control pressure value corresponding to a control temperature value included in the temperature schedule and being less than a theoretical total pressure related to ~~temperature-based on~~ the corresponding control temperature value, the theoretical total pressure being calculated from a theoretical vapor pressure based on the corresponding control temperature and a theoretical partial air pressure based on the corresponding control temperature, thereby helping to prevent moisture from entering into the exposed edge of paperboard, said control pressure values being sufficient to prevent the closed container from bursting.

2. (Previously presented) The method according to Claim 1, wherein cooling includes an initial cooling phase and wherein the pressure schedule tracks the corresponding pressure reduction in the vessel and outside of the closed container due to the concurrent reduction in temperature in the vessel and outside of the closed container during the initial cooling phase.

3. (Original) The method according to Claim 1, wherein the method of processing a food product is an agitation method.

4. (Original) The method according to Claim 1, wherein the method of processing a food product is a static process.

5. (Previously presented) The method according to Claim 1, wherein at least a portion of the pressure schedule follows a theoretical reduction in pressure resulting from the temperature schedule.

6. (Canceled)

7. (Previously presented) The method according to Claim 1, wherein cooling includes reducing the control pressure in the vessel and outside of the closed container in a ramped manner.

8. (Original) The method according to Claim 1, wherein cooking includes using at least one of spray water, trickling water, water vapor, superheated water, steam, and air.

9. (Original) The method according to Claim 1, wherein the control pressure reaches an amount greater than 1.1 bar overpressure during the cooking phase.

10. (Currently amended) A method of batch processing a food product located in a closed container having a paperboard material component, the method comprising:

(a) closing the container using a packaging method whereby at least one edge of paperboard material is exposed to the conditions exterior to the container, and placing the closed container in a retort vessel;

(b) conducting a cooking phase within the vessel;

(c) conducting a cooling phase within the vessel, during which a pressure exists within the vessel and a pressure exists within the paperboard material at the at least one exposed edge; the temperature within the vessel and outside of the container being reduced during the cooling phase according to a predefined temperature schedule, said temperature schedule comprising a plurality of predetermined control temperature values;

(d) wherein the cooling phase includes actively controlling the pressure within the vessel and outside of the container according to a pressure schedule, said pressure schedule comprising a plurality of predetermined control pressure values corresponding to the control temperature values included in the temperature schedule, the control pressure values being less than a theoretical total pressure related to ~~temperature-based on~~ the corresponding control temperature value, the theoretical total pressure being calculated from a theoretical vapor pressure based on the corresponding control temperature and a theoretical partial air pressure based on the corresponding control temperature, so that the pressure in the vessel is less than the pressure in the paperboard material, thereby helping to prevent moisture from entering into the exposed edge of the paperboard of the container, the control pressure values being sufficient to prevent the closed container from bursting.

11. (Previously presented) The method according to Claim 10, wherein cooling includes reducing the pressure in the vessel and outside of the container at a rate in the range of about 0- bar/minute to about -0.25 bar/minute during a portion thereof.

12. (Canceled)

13. (Previously presented) The method according to Claim 10, wherein the pressure in the vessel and outside of the container has a rate of reduction of less than about -0.25 bar/minute.

14. (Original) The method according to Claim 10, wherein the method of processing a food product is an agitation method.

15. (Original) The method according to Claim 10, wherein the method of processing a food product is a static process.

16. (Currently amended) In a method of processing a container comprising a fiber-based material, the container containing a food product and having at least one exposed edge of fiber-based material, the method including placing the container in a retort vessel, conducting a cooking phase within the vessel, and conducting a cooling phase within the vessel; an improvement to conducting the cooling phase comprising:

(a) reducing a temperature within the vessel and outside of the container according to a predefined temperature schedule, said temperature schedule comprising a plurality of predetermined control temperature values; and

(b) actively controlling a pressure within the vessel and outside of the container according to a pressure schedule, said pressure schedule comprising a plurality of predetermined control pressure values corresponding to control temperature values of the

temperature schedule, each control pressure value being less than a theoretical total pressure related to ~~temperature-based on~~ the corresponding control temperature value, the theoretical total pressure being calculated from a theoretical vapor pressure based on the corresponding control temperature and a theoretical partial air pressure based on the corresponding control temperature, so that the pressure within the vessel and outside of the container is less than a pressure in the walls of the fiber-based container during the cooling phase, thereby helping to prevent moisture from entering into the exposed edge of the paperboard of the container, the pressure within the vessel and outside of the container being sufficient to prevent the container from bursting.

17. (Previously presented) The method according to Claim 16, wherein the vessel control pressure is set to an amount in the range between about 0 bar to about 0.4 bar less than pressure within the walls.

18. (Original) The method according to Claim 16, wherein pressure in the walls is determined based on theoretical calculations.

19. (Previously presented) The method according to Claim 16, wherein the cooling phase includes an initial cooling phase, and wherein actively controlling the pressure within the vessel and outside of the container to a value equal to or less than pressure in the walls of the fiber-based container is done during the initial cooling phase.

20. (Original) The method according to Claim 19, wherein the initial cooling phase is equal to or less than about 16 minutes.

21. (Canceled)